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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,893	03/12/2004	Hiroyuki Nakazato	027318-0106	4905

22428 7590 08/26/2005

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WASHINGTON, DC 20007

EXAMINER

PRINCE, FRED G

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 08/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/798,893

Applicant(s)

NAKAZATO, HIROYUKI

Examiner

Fred Prince

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-18 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 13 recites the limitation "said root mat" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-2, 7, 15 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Horvath et al. (Reference "U" on PTO-892).

Horvath et al. teach decreasing a sessile bivalve population in a body of water comprising directing water containing bivalve larvae and mussels (page 29) through a channel (Fig. 1) comprising one or more hydrophytes (page 30; Table 1), the channel inherently containing at least one of the recited organisms found in bodies of water in the region.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3-6, 9-11, and 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horvath et al.

Horvath et al. is described above. Horvath et al. do not disclose the specified hydrophytes.

It is submitted that it is well within the purview of the skilled artisan to use any one of the specified hydrophytes as it is generally known that mussels are capable of attaching to solid objects. Further it is noted that the record does not show, e.g., by comparative test data, that applicant is able to obtain any new and unexpected result by utilizing any of the recited hydrophytes; and absent such a showing, the exact hydrophyte used is a matter of design choice and/or using hydrophytes indigenous to the region, insufficient to patentably distinguish the claims.

Per claims 5-6, 9-10, and 17, Horvath et al. do not explicitly disclose utilizing the recited flow rate or channel depth.

It is submitted that it is well within the purview of the skilled artisan to use any one of the specified depths or flow rates as it involves optimization of known process effective variables. Further it is noted that the record does not show, e.g., by comparative test data, that applicant is able to obtain any new and unexpected result by

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utilizing any of the recited flow rates or channel depths; and absent such a showing, the exact flow rate or channel depth used is a matter of design choice, insufficient to patentably distinguish the claims.

Per claim 11, it is submitted that it is conventional in the art to utilize a pump to transport water from one area to another area by using a pump. Accordingly, it would have been obvious for the skilled artisan to utilize a pump to transport water from one area to another, as known in the art.

Per claims 14 and 18, Horvath et al. do not explicitly disclose utilizing the specified salt concentrations.

It is submitted that it is within the purview of the skilled artisan to utilize the specified salt concentrations in order to facilitate growth of organisms benefiting from salt concentrations within the desired range.

8. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horvath et al. in view of Austin et al. (US Pat No 6,881,338)

Horvath et al. is described above. Horvath et al. do not disclose using a root mat:

In any case, Austin et al. disclose using a root mat in order to establish bio-diverse environment to enhance synergistic treatment of the water and improve overall water quality (col. 36, lines 6-67).

Accordingly, it would have been readily obvious for the skilled artisan to have modified the method of Horvath et al. such that it includes using a root mat in order to

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establish bio-diverse environment to enhance synergistic treatment of the water and improve overall water quality, as shown by Austin et al.

Per claim 13, it is submitted that is known in the art to use a root mat having the recited depth in order to efficiently remove desired matter (see, for example, US Pat No 4,872,985 to Dinges or US Pat No 4,169,050 to Serfling et al.). Accordingly, it would have been readily obvious for the skilled artisan to modify the method of Horvath et al., as modified by Austin et al., such that it includes using a root mat having the recited depth in order to efficiently remove desired matter, as known in the art.

Allowable Subject Matter

9. Claim 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: While claim 1 is not patentable for the reasons provided above, and it is known in the art to provide a floating environment for hydrophytes (see, for example, US Pat No 5,337,516 to Hondulas), in the examiner's opinion, the prior art fails to teach or fairly suggest providing a channel attached to a float.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References are cited of interest to show the state of the art.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred Prince whose telephone number is (571) 272-

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1165. The examiner can normally be reached on Monday-Thursday, 6:30-4:00; alt. Fridays 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Fred Prince
Primary Examiner
Art Unit 1724

fgp
8/15/05